

## **REMARKS**

Applicants have amended claims 1, 14, 25, 33 and 43, and claims 2 to 6, 8 to 10, 15 to 18, 22 to 24, 28, 30 to 32, 35 to 36, 38 to 40, and 45 to 47 have previously been cancelled. Thus, Applicants submit that claims 1, 7, 11 to 14, 19 to 21, 25 to 27, 29, 33, 34, 37, and 41 to 44 are currently pending in this patent application. Applicants now address each and every point raised by the Examiner in the above-identified Office action as follows:

### **1. Claim Rejections Under Section 103 – Claims 1, 7, 11, 12, 14, and 19-21**

The Examiner maintains the rejection against claims 1, 7, 11, 12, 14, and 19-21 under 35 U.S.C. §103(a) as allegedly being unpatentable over JP 05-156301 (“JP’301”) as evidenced by U.S. Patent No. 5,934,542 to Nakamura et al. (“US’542”) and in view of JP 10-284547 (“JP’547”). Applicants have amended independent claims 1 and 14 to change the terms “consisting essentially of” to “consisting of”. Thus, Applicants’ invention as recited in independent claims 1 and 14 comprises a cermet material having a very specific material content. Namely, one having a first phase of WC grains and a second phase of iron, Co, Ni, C and Mn.

Applicants submit that its response dated May 11, 2009, to this basis of rejection, addressed the different references both independently (for the purpose of pointing out the weakness of each), and as combined together (for the purpose of pointing out that the combination of references each having weaknesses could not operate to somehow cure what was missing in each). Applicants now present again their arguments and request that the same be considered in the context of the amended independent claims.

JP ‘301 discloses a sintered article formed by combining an Invar or Super Invar powder with a ceramic powder that may be a carbide. As noted by the Examiner, JP ‘301 does not disclose the use of WC. Additionally, the Invar or Super Invar powder disclosed in JP ‘301 (as set forth in Table 1) has a material composition that includes materials in addition to those within the scope of Applicants’ claims (in view of “consisting of” language).

Applicants only received a copy of the Derwent abstract translation for JP ‘547, and did not receive a copy of the reference itself. As best as can be determined, JP ‘547 discloses a

contact tool having a main body tool joined to a shank by a soldering material. The main body tool has a base made from 90 to 98 percent by weight WC with Co. The Examiner relies on JP '547 for introducing W into the ceramic powder of JP '301 in the event that such is carbide. However, like JP '301, JP '547 fails to disclose a binder alloy having the same material make up as Applicants' binder recited in independent claims 1 and 14.

Nakamura has been relied upon by the Examiner for its disclosure of Super Invar. However, it is important to note that the Super Invar material composition as recited in Nakamura includes materials other those within the scope of Applicants' claims (in view of "consisting of" language).

In view of the above-noted common shortcoming of each of the cited references (failing to disclose the exact combination of materials making up the binder alloy as recited in independent claims 1 and 14), the combination of these references could not therefore produce a material composition that is missing in each. Applicants, therefore, submit that one having ordinary skill in the art combining these references would not find Applicants' cermet material as recited in independent claims 1 and 14 to be obvious in view thereof. For this reason, Applicants respectfully request that the rejection of amended independent claims 1 and 14, and the claims depending therefrom, under 35 U.S.C. §103(a) be reconsidered and withdrawn.

## **2. Claim Rejections Under Section 103 – Claims 13, 33, 34, 37, 41, and 42**

The Examiner maintains the rejection against claims 13, 33, 34, 37, 41, and 42 under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Publication No. 2006/0222853 to Sue et al. ("PG'853") in view of JP'301 as evidenced by US'542 and in view of JP'547. Applicants have amended independent claims 1, 33 and 41 change the terms "consisting essentially of" to "consisting of". Thus, Applicants' invention as recited in independent claims 1, 33 and 41 comprises a cermet material having a very specific material content. Namely, one having a first phase of WC grains and a second phase of iron, Co, Ni, C and Mn.

Applicants submit that its response dated May 11, 2009, to this basis of rejection, addressed the different references both independently (for the purpose of pointing out the

weakness of each), and as combined together (for the purpose of pointing out that the combination of references each having weaknesses could not operate to somehow cure what was missing in each). Applicants now present again their arguments and request that the same be considered in the context of the amended independent claims.

Here, the Examiner relies on Sue for its disclosure of a roller cone rock bit, inserts in the rock bit, WC combined with alloys to form an insert material, and a material microstructure of WC-Co surrounded by a further ductile material such as Co. However, Sue fails to disclose a binder alloy having the specific material content recited in Applicants' independent claims 1 and 33 (as discussed above).

Thus, Applicants submit that *the further combination* of Sue with the other references (JP '301, JP '547 and Nakamura) does not operate to render obvious that which is missing in each of the above-noted references for the same reason presented above. Applicants, therefore, respectfully request that the rejection of amended independent claims 1, 33 and 41, and the claims depending therefrom, under 35 U.S.C. §103(a) be reconsidered and withdrawn.

### **3. Claim Rejections Under Section 103 – Claims 25-27 and 29**

The Examiner maintains the rejection against claims 25-27 and 29 under 35 U.S.C. §103(a) as allegedly being unpatentable over PG '853 in view of JP'301 as evidenced by US'542 and in view of JP'547. Applicants have amended independent claim 25 to change the terms "consisting essentially of" to "consisting of". Thus, Applicants' invention as recited in this independent claim comprises a cermet material having a very specific material content. Namely, one having a first phase of WC grains and a second phase of iron, Co, Ni, C and Mn.

Applicants submit that its response dated May 11, 2009, to this basis of rejection, addressed the different references both independently (for the purpose of pointing out the weakness of each), and as combined together (for the purpose of pointing out that the combination of references each having weaknesses could not operate to somehow cure what was missing in each). Applicants now present again their arguments and request that the same be considered in the context of the amended independent claim.

Applicants submit that the subject matter as recited in independent claim 25 is not obvious in view of the combination of noted references for the same reasons presented above as it applies to amended independent claim 1, since amended independent claim 25 also recites the specific content of the binder alloy using the “consisting of” language. Applicants, therefore, respectfully request that the rejection of amended independent claim 25, and the claims depending therefrom, under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

#### **4. Claim Rejections Under Section 103 – Claims 43 and 44**

The Examiner maintains the rejection against claims 43 and 44 under 35 U.S.C. § 103(a) as allegedly being unpatentable over PG’853 in view of JP’301 as evidenced by US’542 and in view of JP’547. Applicants have amended independent claim 43 to change the terms “consisting essentially of” to “consisting of”. Thus, Applicants’ invention as recited in this independent claim comprises a cermet material having a very specific material content. Namely, one having a first phase of WC grains and a second phase of iron, Co, Ni, C and Mn.

Applicants submit that its response dated May 11, 2009, to this basis of rejection, addressed the different references both independently (for the purpose of pointing out the weakness of each), and as combined together (for the purpose of pointing out that the combination of references each having weaknesses could not operate to somehow cure what was missing in each). Applicants now present again their arguments and request that the same be considered in the context of the amended independent claim.

Applicants submit that the subject matter as recited in amended independent claim 43 is not obvious in view of the combination of noted references for the same reasons presented above as it applies to independent claim 1, since independent claim 43 also recites the specific content of the binder alloy using the “consisting of” language. Applicants, therefore, respectfully request that the rejection of amended independent claim 43, and claim 44 depending therefrom, under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

## 5. Conclusion

For the reasons presented above, Applicants respectfully request that the rejection of the claims under 35 U.S.C. § 103 be reconsidered and withdrawn, and that the claims 1, 7, 11 to 14, 19 to 21, 25 to 27, 29, 33, 34, 37, and 41 to 44 pending in this patent application be passed to allowance.

Should the Examiner's evaluate this Response and conclude that the claims are not properly allowable, Applicants request that the Examiner please call its below-identified patent attorney to discuss options that may be implemented to facilitate allowance.

The proceedings herein are for a patent application and the provisions of 37 C.F.R. 1.136 apply. The Commissioner is authorized to charge any underpayment, and to credit any overpayment of fees due, including extension of time fees, to Deposit Account No. 50-3683.

Respectfully submitted,

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